

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 11, 13-15, 19, 21, 22 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirasawa (US 5,179,168) in view of Dawson (US 6, 217,982).

In regards to claims 1 and 25, Hirasawa discloses an ionomer composition that consists of a blend comprising at least two ionomers (col. 2 lines 56-57). The blend comprises a 5-99 parts by weight of the ionomer composition and 95-1 parts by weight of a thermoplastic polymer (col. 2 lines 48-52). The ethylene/unsaturated carboxylic acid copolymers are at least partially neutralized with at least one alkali metal selected from the group consisting of potassium rubidium, and cesium (col. 2 lines 31-35). The ethylene/unsaturated carboxylic acids have an average acid content of 0.5 to 15 mole% (col. 2 lines 29-44). The difference of the unsaturated carboxylic acid content between ionomers is at least 2 mole% (col. 3 lines 36-41). The neutralization degree (ionization degree) by potassium is 62% or more (table 1 and table 2). The thermoplastic polymer is selected from the group such as medium density polyethylene, high density polyethylene, polypropylene, poly-4-methyl-1-pentene and combinations thereof (col. 6 lines 9-23).

Hirasawa discloses that various thermoplastic polymers can be blended into the ionomer composition, such as ethylene/vinyl acetate copolymer and an ethylene/unsaturated carboxylic ester copolymer (col. 6 lines 6-15). However, Hirasawa is silent with regards to the ethylene/vinyl acetate copolymer or the ethylene/unsaturated carboxylic ester copolymer being additionally blended with an additional thermoplastic such as polypropylene.

Dawson discloses a thermoplastic polymer alloy composition made by blending ethylene/alkyl(meth)acrylate with a blend of polypropylene, ethylene copolymer ionomer resin, ethylene/glycidyl acrylate or methacrylate copolymer and uncrosslinked ethylene propylene rubber (abstract). The ethylene/alkyl (meth)acrylate copolymer preferably contains 5 to 26 percent alkyl (meth) acrylate monomer wherein the alkyl group preferably is methyl but can be a higher alkyl group up to octyl (col. 4 lines 14-19). The ethylene/alkyl (meth)acrylate copolymer is present in amount of 1-15 parts by weight per hundred parts of the thermoplastic alloy composition (col. 1 lines 60-63).

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the ethylene/alkyl(meth)acrylate copolymer as disclosed by Dawson in the ionomer composition of Hirasawa, because the ethylene/alkyl(meth)acrylate copolymer as disclosed by Dawson provides a thermoplastic polymer alloy composition with excellent low temperature properties coupled with heat and scuff resistance (col. 1 lines 8-11).

In regards to claims 11, Hirasawa discloses can be a single layer (col. 5 lines 63-66).

In regards to claims 13-15, Hirasawa discloses a multi-layer article that can be formed with the ionomer composition and a thermoplastic resin, a paper sheet or a metal (col. 5 lines 63-68). The thermoplastic resin can be polyolefin resins (col. 6 lines 9-10).

In regards to claims 19, 21 and 22, Hirasawa discloses that the ionomer composition can be used for a packaging film, a mat, a container, a wall paper sheet, a battery separator and the like (col. 5 lines 63-66).

### ***Response to Arguments***

3. Applicant's arguments with respect to claims 1, 11, 13-15, 19, 21-22 and 25 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELLEN S. WOOD whose telephone number is (571)270-3450. The examiner can normally be reached on M-F 730-5 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571)272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1782

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/ELLEN S WOOD/  
Examiner, Art Unit 1782

/Rena L. Dye/  
Supervisory Patent Examiner, Art Unit 1782